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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,899	01/29/2004	Masanori Amano	032111	2604

38834 7590 09/08/2009
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EXAMINER

SIMONE, CATHERINE A

ART UNIT	PAPER NUMBER
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1794

NOTIFICATION DATE	DELIVERY MODE
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09/08/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

Office Action Summary	Application No. 10/765,899	Applicant(s) AMANO ET AL.	
	Examiner CATHERINE SIMONE	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5,7,9 and 11 is/are pending in the application.
- 4a) Of the above claim(s) 5,7,9 and 11 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/16/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/16/2009 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US 2002/0047560 A1) in view of Amano et al. (JP 2002-293049; refer to the translation of record).

Regarding claim 1, Lee et al. teach a layer forming relief for transferring and printing an application fluid such as an organic luminous substance applied on printing convex portions on a printing object (*paragraph 0011*), the layer forming relief comprising the printing convex portions formed as linear strips and aligned to be parallel with each other with a pitch (*Figs. 4, 6A, 6B, 9B and 11B, strips/lands 12; paragraph 0028*), and a plurality of micro-projections on top faces of each of the printing convex portions (*Figs. 6A, 9B and 11B, areas between*

indentations 12a) and grooves (*Figs. 6A, 9B and 11B, indentations 12a*) between adjoining micro-projections for retaining the application fluid (*paragraph 0028*), wherein the pitch of the printing convex portions (*Figs. 9B, 9C, 11B and 11C, convex portions 12*) matches a width of one pixel printed on the printing object (*see Figures 8-11; and paragraphs 0035-0039*).

Lee et al. fail to teach a plurality of micro-projections formed into a truncated cone or in a cylinder being uniformly distributed on top faces of each of the printing convex portions, wherein the height of the micro-projection is in the range of 2 to 50 μm , the space between the adjoining micro-projections is 7 μm or more, the diameter of the top face of the micro-projections is 5 μm or more, and the number of the micro-projections is in the range of 2 to 30.

Amano et al. teach a layer forming relief including a plurality of micro-projections formed of a truncated cone or cylinder shape (*see paragraph 0010, lines 1-2*), wherein the height of the micro-projections is in the range of 2 to 50 μm (*paragraph 0019, lines 9-10*), the space between adjoining micro-projections is 7 μm or more (*paragraph 0019, lines 7-9*), the diameter of the top face of the micro-projections is 5 μm or more (*paragraph 0020*), and the number of micro-projections is in the range of 2 to 30 (*paragraph 0017*) for the purpose of preventing the occurrence of a marginal phenomenon and ensuring formation of an orientation film having an even thickness when printing and transferring a coating liquid onto an object.

The micro-projections (*areas between indentations 12a*) in Lee et al. are analogous to the micro-projections in Amano et al., since they both are being used for transferring and printing a liquid applied thereon onto a printing object.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the micro-projections of the convex portions in Lee et al.

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to be micro-projections in the form of a truncated cone or cylinder wherein the height of the micro-projections is in the range of 2 to 50 μm , the space between adjoining micro-projections is 7 μm or more, the diameter of the top face of the micro-projections is 5 μm or more, and the number of micro-projections is in the range of 2 to 30 as suggested by Amano et al. in order to prevent the occurrence of a marginal phenomenon and ensure formation of an orientation film having an even thickness when printing and transferring a coating liquid onto an object. Furthermore, it would have been an obvious matter of design choice to modify the plurality of micro-projections to be uniformly distributed on top faces of each of the printing convex portions, since such a modification would have involved a mere change in the pattern of the micro-projections. A change in pattern or shape is generally recognized as being within the level of ordinary skill in the art, absent unexpected results. MPEP 2144.04(I) and (IV). One of ordinary skill in the art would have been motivated to change the pattern of the micro-projections to be uniformly distributed on top faces of each of the printing convex portions in order to change the visual appearance of the layer forming relief. It is desirable to change the visual appearance of the layer forming relief in order to make the layer forming relief more appealing to the consumer.

Furthermore, the limitation “capable of transferring and printing an organic luminous substance having a viscosity in the range of 50 to 100 $\text{mPa}\cdot\text{s}$ ” is a recitation of the intended use of the claimed invention. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In this particular case, as shown above, the

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combination of Lee et al. and Amano et al. teaches a layer forming relief having the same structure as that of the claimed layer forming relief. Therefore, the layer forming relief taught by the combination of Lee et al. and Amano et al. is capable of performing the claimed intended use, i.e. capable of transferring and printing an organic luminous substance having a viscosity in the range of 50 to 100 mPa·s. See MPEP 2114.

Allowable Subject Matter

4. Claim 3 is allowed. The following is an examiner's statement of reasons for allowance:

Claim 3 is deemed allowable over the references Lee et al. (US 2002/0047560) and Komura (JP 2003-029271), since the combination fails to disclose or render obvious the distinct feature of "a plurality of projected micro-strips distributed on the top faces of each of the printing convex portions, wherein the height of the projected micro-strips is in the range of 2 to 55 μm , the width of the top face of the projected micro-strips is 3.5 μm or more, the space between the adjoining projected micro-strips is 7 μm or more, and the number of the projected micro-strips is in the range of 2 to 33 and is formed so as to be distributed in the width direction of the top face on the printing convex portion".

While Lee et al. disclose a layer forming relief comprising printing convex portions formed as linear strips and aligned to be parallel with each other with a pitch, Lee et al. fail to anticipate or render obvious the distinct feature of "a plurality of projected micro-strips distributed on the top faces of each of the printing convex portions, wherein the height of the projected micro-strips is in the range of 2 to 55 μm , the width of the top face of the projected micro-strips is 3.5 μm or more, the space between the adjoining projected micro-strips is 7 μm

or more, and the number of the projected micro-stripes is in the range of 2 to 33 and is formed so as to be distributed in the width direction of the top face on the printing convex portion”.

While Komura teaches a layer forming relief having printing convex portions and a plurality of projected micro-stripes distributed on the top faces of each of the printing convex portions, wherein the height of the projected micro-stripes is in the range of 2 to 55 μm , the width of the top face of the projected micro-stripes is 3.5 μm or more, the space between the adjoining projected micro-stripes is 7 μm or more, and the number of the projected micro-stripes is in the range of 2 to 33 and is formed so as to be distributed in the width direction of the top face on the printing convex portion, Lee et al. and Komura are not combinable. The reasons why they are not combinable is clearly pointed out in Applicant's arguments filed 6/16/2009 on pages 12-15.

Response to Arguments

5. Applicant's arguments, see pages 12-15, filed 6/16/2009, with respect to the rejection of claim 3 under 35 U.S.C. 103(a) as being unpatentable over Lee et al. in view of Komura have been fully considered and are persuasive. The rejection of claim 3 has been withdrawn.

6. Applicant's arguments filed 6/16/2009 with regard to the rejection of claim 1 under 35 U.S.C. 103(a) as being unpatentable over Lee et al. in view of Amano et al. have been fully considered but they are not persuasive.

Applicants argue that “the absence of a need for barrier ribs, and the uniformity of the printed pattern are not structural features of the claimed layer forming relief. Rather, these are

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inherent properties of the claimed layer forming relief. In other words, due to the recited structure of the printing convex portions and micro-projections of the layer forming relief, the layer forming relief necessarily has the ability to print the fluid in a precise and fine pattern with a uniform thickness, without the need for a barrier rib”.

This is not deemed persuasive. The absence of a need for barrier ribs, and the uniformity of the printed pattern are deemed structural features of the claimed layer forming relief and these features are not being recited in the rejected claim. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, Lee et al. teaches a uniform printed pattern but requires the need for barrier ribs in order to achieve the uniformity of the printed pattern. However, it is to be pointed out that claim 1 recites the transitional phrase “comprising” and the word “comprising” transitioning from the preamble to the body signals that the entire claim is presumptively open-ended. See MPEP 2111.03. Therefore, the layer forming relief recited in claim 1 can include barrier ribs. Claim 1 does not exclude barrier ribs, since the transitional phrase is “comprising”. Accordingly, even if Lee et al. requires barrier ribs to achieve a uniform printed pattern, claim 1 remains obvious over Lee et al. in view of Amano et al., since claim 1 is not excluding barrier ribs, which is a structural feature.

Applicant’s then argue “one having ordinary skill in the art would have expected that if this embodiment of Lee was modified such that it has the micro-projections of Amano, the result would be no different from that discussed in Lee. One having ordinary skill in the art would have expected that such a combination would still require the barrier ribs illustrated in Figures 9A-9D in order to stop ‘spreading’. However, the combination lacked the expected property of

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‘spreading’, thus negating the need for barrier ribs in order to obtain a precise, fine pattern with uniformity. The absence of an expected property is evidence of non-obviousness”.

This is not deemed persuasive. Again, the absence of a need for barrier ribs is a structural feature and this feature is not being recited in the rejected claim. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Additionally, claim 1 is not excluding barrier ribs, since the transitional phrase in claim 1 is “comprising”, which signals that the entire claim is presumptively open-ended. Accordingly, even if the combination of Lee et al. and Amano et al. requires barrier ribs to achieve a uniform printed pattern, claim 1 remains obvious over Lee et al. in view of Amano et al., since claim 1 is not excluding barrier ribs, which is a structural feature.

Furthermore, Applicants argue “as illustrated in Amano, the resin relief printing plate 1 includes a printing relief portion 2 having a rectangular shape and a top surface formed with a plurality of minute projections 3. The minute projections 3 are arranged at a higher distribution density in the peripheral region than in the center region of the printing relief plate 2. See Figure 2. If Lee and Amano were combined, the land 12 of Lee would be formed by the minute projections 3 of Amano instead of projections 12a. Thus, the minute projections 3 would be arranged at a higher distribution density in the peripheral region than in the center region of the land 12. Printing with the above convex portion 12 would result in uneven printing which deteriorates sharpness and uniformity of printing patterns. As such, one having ordinary skill in the art would not have had a reason to modify Lee to incorporate the micro-projections of Amano”.

This is not deemed persuasive. As shown in the 103 rejection above, Amano was cited to teach a layer forming relief including a plurality of micro-projections formed of a truncated cone or cylinder shape (*see paragraph 0010, lines 1-2*), wherein the height of the micro-projections is in the range of 2 to 50 μm (*paragraph 0019, lines 9-10*), the space between adjoining micro-projections is 7 μm or more (*paragraph 0019, lines 7-9*), the diameter of the top face of the micro-projections is 5 μm or more (*paragraph 0020*), and the number of micro-projections is in the range of 2 to 30 (*paragraph 0017*) for the purpose of preventing the occurrence of a marginal phenomenon and ensuring formation of an orientation film having an even thickness when printing and transferring a coating liquid onto an object. The micro-projections (*areas between indentations 12a*) in Lee et al. are analogous to the micro-projections in Amano et al., since they both are being used for transferring and printing a liquid applied thereon onto a printing object. Thus, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the micro-projections of the convex portions in Lee et al. to be micro-projections in the form of a truncated cone or cylinder wherein the height of the micro-projections is in the range of 2 to 50 μm , the space between adjoining micro-projections is 7 μm or more, the diameter of the top face of the micro-projections is 5 μm or more, and the number of micro-projections is in the range of 2 to 30 as suggested by Amano et al. in order to prevent the occurrence of a marginal phenomenon and ensure formation of an orientation film having an even thickness when printing and transferring a coating liquid onto an object. Furthermore, it would have been an obvious matter of design choice to modify the plurality of micro-projections to be uniformly distributed on top faces of each of the printing convex portions, since such a modification would have involved a mere change in the pattern of the

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micro-projections. A change in pattern or shape is generally recognized as being within the level of ordinary skill in the art, absent unexpected results. MPEP 2144.04(I) and (IV). One of ordinary skill in the art would have been motivated to change the pattern of the micro-projections to be uniformly distributed on top faces of each of the printing convex portions in order to change the visual appearance of the layer forming relief. It is desirable to change the visual appearance of the layer forming relief in order to make the layer forming relief more appealing to the consumer.

For the reasons given above, claim 1 is unpatentable over Lee et al. in view of Amano et al.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CATHERINE SIMONE whose telephone number is (571)272-1501. The examiner can normally be reached on Monday-Friday 9:30-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Catherine Simone/
Examiner, Art Unit 1794

August 31, 2009